

THE CHEMIST

MARCH 1951



VOLUME XXVIII No. 3



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LOUIS N. MARKWOOD, F.A.I.C.

Chairman, Washington Chapter

(See Page 83)

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SCHEDULED FOR EARLY ISSUES

The Increasing Responsibilities of the Chemist, by Ralph Lamenzo, F.A.I.C.
Employment Project News

The Education of the Chemist for Tomorrow's World, Dr. M. L. Crossley, Hon. AIC.

The Chemist and His Neighbors, James G. Vail, F.A.I.C.

Some Recent Developments in Testing Germicides, Dr. E. G. Klarmann, F.A.I.C.

From Photography to Food, Dr. J. E. Magoffin, F.A.I.C.

The Responsibility of the Chemist to His Profession, Dr. Harry L. Fisher, Hon. AIC.

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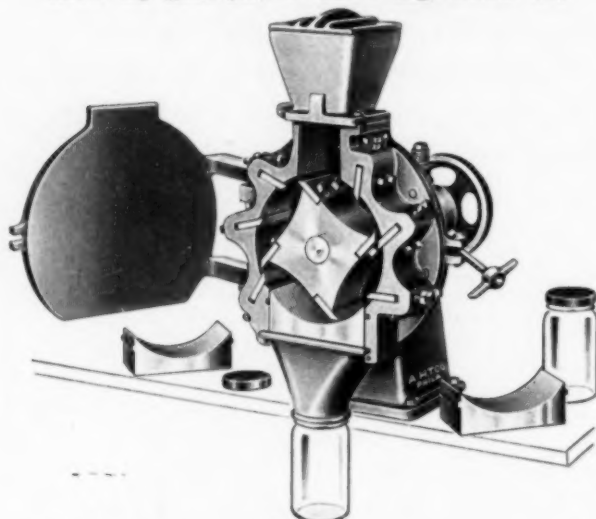
Louis N. Markwood, now serving his fifth term as president of the Washington Chapter, AIC, has been active in the INSTITUTE since joining in 1925. Although born in New York, N.Y., he claims Cleveland, Ohio, as his home city where he grew up and was graduated from Case Institute of Technology in 1917. He is a government career man, having worked practically all of his time in three federal agencies. Following service in the army with the forerunner of the Chemical Corps, he worked successively in the U.S. Department of Agriculture, the Tariff Commission, and the Department of Commerce. His principal chemical activity was research on insecticides (arsenicals, nicotine and other plant constituents). He was the first to identify the alkaloid nornicotine in American tobacco. With the Tariff Commission he served as special expert on chemicals.

Mr. Markwood worked on his own as a consultant for two years. In 1942, when war work came to the fore, he joined the Bureau of Domestic Commerce to aid in developing chemical requirements of friendly nations. He has remained in the Department of Commerce since, although now in the National Production Authority as chief of the Inorganic Chemical Section. Much of his former work in Commerce was devoted to foreign trade promotion and he has traveled abroad on official assignments.

The Washington Chapter was one of the early ones and owes much of its success to a faithful nucleus originating in the Department of Agriculture. Decentralization of government laboratories has dispersed many of the original group but the convergence of science and industry on Washington, now the nation's focal point, accounts for substantial additions to the membership. The Chapter's chief objectives this year are more members and greater association of members through luncheon meetings.

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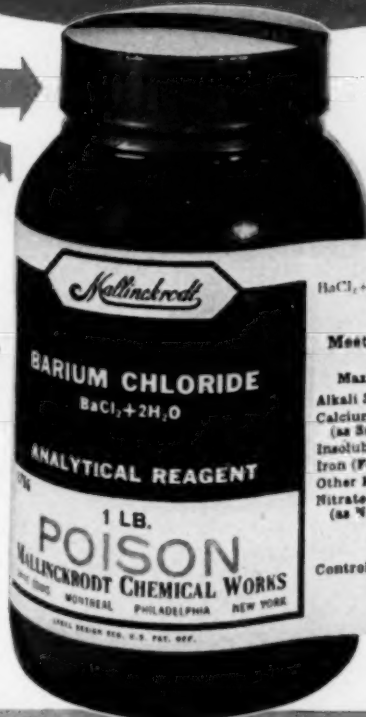
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The 1951 Annual Meeting

A. E. Jennings, F.A.I.C.

Technical Division, E. I. du Pont de Nemours & Co., Niagara Falls, N.Y.

The Niagara Chapter is honored to be hosts at the 1951 Annual Meeting of THE AMERICAN INSTITUTE of CHEMISTS, to be held May 9th, 10th, and 11th. Headquarters for this meeting will be the Hotel General Brock, Niagara Falls, Ontario, Canada. To those not wholly familiar with the geography of this location, we hasten to state that this beautifully located hotel is at the Canadian

end of the Rainbow Bridge to Niagara Falls, N.Y., and from its rooms the majestic falls of the Niagara River are clearly visible. Since Canadians are always excellent hosts, it is anticipated that the choice of this location for headquarters will prove to be completely satisfactory to most members.

A condensed version of the general program for this meeting follows:

WEDNESDAY, May 9th

- 8:00—12:00 a. m.—Registration and visitation.
- 1:00 p. m.—Golf tournament (season permitting)
- 2:00 p. m.—Plant visitation
- 7:00 p. m.—Dinner at Country Club (tentative).

THURSDAY, May 10th

- 10:00 a. m.—Annual Business Meeting
- 10:00—12:00 a. m.—Social Period
- 12:00 noon—Luncheon, Hotel General Brock
- 2:00—4:30 p. m.—Technical sessions.

No Formal Dinner Planned

FRIDAY, May 11th

- 8:00 a. m.—Breakfast meeting of National Council
- 9:30—12:00 a. m.—Technical sessions
- 12:00 noon—Honor recipients' luncheon
- 2:00—4:00 p. m.—General session (A symposium under Dr. E. Whitford on relations between management and technical personnel).
- 6:00 p. m.—Reception to Medalist.
- 7:30 p. m.—Medal Award Banquet

A condensed schedule of activities for the ladies includes:

WEDNESDAY, May 9th

Visit to Shredded Wheat Company
Dinner at Country Club

THURSDAY, May 10th

Sightseeing trips, Niagara Falls, N.Y.
Sightseeing trip to Niagara Glen, Niagara Falls, Ont.

FRIDAY, May 11th

Sightseeing
Reception to Medalist
Medal Award Banquet

Lester F. Hoyt, chairman of the Program Committee, has prepared a program of symposia, which present some of our outstanding leaders in different chemical fields. One symposium will deal with "Translating Results of Research into Profitable Production;" a second will deal with the subject of "Education of the Chemist"; a third will deal with the "Responsibilities of the Chemist in a Changing World"; a fourth will deal with "Recent Progress Made in Chemical Researches."

Plant Visits

The first two symposia will run concurrently on Thursday, May 10th, in the afternoon; the latter two will be held on Friday, May 11th. For Wednesday afternoon, May 9th, three visits to industrial plants have been made possible. First, a visit to the Electrochemicals Department of the E. I. du Pont Company at 2:00 p.m., limited to a total of fifty; second, a visit to the Hooker Electrochemical Company, likewise limited to a total of fifty, and third, a visit to the International Paper Company.

In each case, reservations must be made in advance, and the following information should be sent, prior to May first, directly to:

Dr. Hans O. Kauffmann
Buffalo Electro-Chemical Co. Inc.
Station B, Buffalo 7, N.Y.

Name, Birthplace, Citizenship, and choice of plant visit to be made. This information is required in order to issue in advance temporary passes, as such plants now operate under emergency regulations, as the members of the Institute will appreciate.

A more detailed program will be published in the April issue of THE CHEMIST.

Honor Recipients Luncheon

One item of particular interest for Friday noon, May 11th, should be called to the attention of all, as at that time the members can meet with those whom they have officially honored in the past. Also, this year's recipient of an Honorary Membership given by the INSTITUTE will be present. The speaker at this luncheon meeting will be the Schoellkopf Medalist of 1945, Dr. Alexander

Schwarcman, of Buffalo, New York.

Chemical Industry at Niagara

In a separate article (see page 97), Mr. Koethen of the Niagara Chapter will call attention to many reasons why a meeting on the Niagara Frontier should be most enjoyable from a scenic and historical viewpoint. We think it is a happy choice also for another reason: Nowhere in the country is there congregated so extensive and varied a group of electrochemical industries as on the Niagara Peninsula. The Frontier has a diversity of sixty percent of all lines recognized by the U.S. Census Bureau, which includes 446 classes of industries. This little area of approximately forty square miles between Lake Erie and Lake Ontario is often referred to as "Electrochemistry's Capitol." The month of May is a beautiful time to come to the Niagara Frontier, by boat, rail, air or automobile, to enjoy both the technical sessions and to make visits to various spots in the area endowed with natural advantages. It would be selfish not to include the family, so pass along the word, "We are going to meet in May on the Niagara Frontier."

Chemists in particular will be interested in the ratio of the alleged value of organic to inorganic chemicals made in this area, which is now running 5:1. Some persons have thought that the combination of

cheap power, unlimited transportation facilities, and tremendous quantities of good water would result in a tremendous inorganic business on the Frontier; but the billion dollar business now concentrated in the industries on the Niagara Frontier is, as indicated above, heavily organic—basically. This trend has been developing for several years and has resulted largely from increasing diversification of interest in the chemical industries operating in this area.

Customs Information

Since there naturally will be considerable migration across the bridges to and from Canada during this meeting, it is well to remember that positive identification of citizenship should be made available to the immigration officers by each person as he or she crosses the bridge. By far the simplest and best identification to use is either an original birth certificate or a photostat copy of the same. Any passports with the owner's picture thereon, or even passes to industrial employment points are acceptable in lieu of the birth certificate. It is well to consider this, although United States citizens may not be asked to identify themselves by anything more than the answering of questions put by the immigration officers at the time of crossing to and from Canada. The fees for crossing are \$0.10 per person, if walking across the bridge; or \$0.25 per car and driver, with an additional charge

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A question which is often asked relates to customs duties on articles purchased in Canada. If the person has been in Canada a minimum of forty-eight hours, he or she can bring back to the United States, duty free, up to \$300 worth of merchandise, which includes a maximum of one gallon of liquid and/or one pound of tobacco, as well as the usual items of wool and imported china, often considered of better value than U.S. goods.

As to the availability of mixed drinks on the Canadian side, the hotels and restaurants are not prepared to serve occasional cocktails. How-

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ever, by filling out a permit at the hotel, parties can have liquors, wines, beer, and ale purchased and delivered to their rooms. For these reasons, most cocktail parties are staged on the U.S. side, and should the INSTITUTE schedule such a party it will probably be on the United States side of the Niagara River.

Scientific Apparatus Meeting

Emergency controls as they affect the manufacture of scientific instruments and laboratory apparatus will be considered at the 33rd Annual Meeting of the Scientific Apparatus Makers Association, April 15th-18th, at the Greenbrier Hotel, White Sulphur Springs, West Virginia.

Chemistry When? What? How?

Dr. Alexander Silverman, Hon. AIC

Head of the Department of Chemistry, University of Pittsburgh

(Address accepting Honorary AIC Membership)

FIRST let me express sincere appreciation of the honor which has been conferred on me. I accept it with my former professors, my colleagues, my pupils, my patient wife, and many friends, all of whom have helped to mold my career as a teacher.

Let me explain the title: "*When?*" refers to the time at which the study of chemistry should begin. "*What?*" will cover subject matter. "*How?*" will concern itself with methods of study and presentation. I did not include "*Why?*" as it is assumed that anyone who observes Nature wants to know more about it. I did not mention "*Where?*" because it really does not matter too seriously where chemistry is taught or studied.

When?

It is never too early or too late to learn. The sweet taste of sugar appeals to an infant as does attractive color. The babe-in-arms reacts to heat and cold. These properties are observed early, though perhaps not understood. When should study begin? This question cannot be answered specifically. In the speaker's case it began while collecting stamps, as a

boy, probably while using benzine to accentuate water marks, and hydrogen peroxide and other chemicals to restore the color to faded stamps; also, the privilege of visiting behind the prescription counter with a friend who worked in a neighborhood pharmacy was a factor. Today, children play with chemistry sets. The latest of these even includes atomic energy experiments with simple devices for detecting radiations.

It is regrettable that the formal study of chemistry is tied in with schedules. When Ezra Cornell founded the University which bears his name he announced, "I would found an institution where any man can learn anything". The speaker would like to supplement this precious ideal with the words "at any time". The most vicious influence in modern education is the schedule. What a pity that the student may not have a place where he can study what he wants when he wishes and as long as he likes, day, night, workdays, holidays. Why not let him progress at his own pace, granting him a degree when he has satisfactorily completed enough

work, whether in one year or in six. Men may be "created equal" but their abilities and ambitions vary. Why kill ambition with formal schedules? Why cause students to fail who will succeed if given more time? Selective instruction will cultivate genius in exceptional students, but it will also make the slower thinkers and workers valuable servants of mankind.

What?

I shall restrict this to general chemistry in whose teaching I have had my major experience. Here I should begin with "Matter and Energy", because they are the major considerations for science. I should go at once into the divisibility of matter, and then launch the idea of atoms and their parts, indicating how the latter function in the various chemical elements. This may savor of physics, but physics and chemistry are linked inseparably. Now, having taught the student the why of relative or atomic weights, and having indicated why and how atoms react, I would introduce the kinetics of the particles, the laws formulated to interpret them, and finally the chemistry of the elements and their compounds. How many of the latter should be included will depend on the student's plans for the future. Certainly the general fundamentals should constitute a part of every course, for they are essential to sound

thinking and reasoning in natural science.

How?

While considerations already covered are important, the most important question is "How shall we teach the student?" Shall we let him find the facts for himself? Shall we resort to cold, dry description and presentation of facts? Shall we illustrate our statements experimentally and visually?

If selective instruction were in vogue, lectures, except occasional inspirational talks, would not be necessary, especially if a good library is available. But we must still follow schedules and resort to lectures. In general chemistry these should be illustrated fully with pertinent, well-prepared and well conducted experiments. We, in the University of Pittsburgh, are indeed fortunate in having Dr. Fred Y. Herron's full-time service. He is a most ingenious designer, builder, and demonstrator of lecture equipment. He has studied color lighting. He understands the psychology of lecture demonstration. His models to illustrate atomic structure, tendency, and periodicity are valuable aids to teaching.

In presenting subject matter to the student, logical organization is desirable. The student should know what his course is to cover, what is expected of him, how he will be judged. The lecturer should know his subject, and except for occasional



—*Chemical & Engineering News*

PRESENTATION

Left to right: front row—Tobias H. Dunkelberger, head, Department of Chemistry, Duquesne University; Professor Silverman; Walter J. Murphy, Editor, American Chemical Society; Edward R. Weidlein, director, Mellon Institute; John C. Warner, president, Carnegie Institute of Technology. Back row—J. Steele Gow, Falk Foundation; Stanton C. Crawford, dean of the College, University of Pittsburgh; John R. Bowman, head, department of Research in Physical Chemistry, Mellon Institute; and Rufus H. Fitzgerald, chancellor, University of Pittsburgh.

reference to notes, should speak extemporaneously. Important quotations should be read, but not long pages from book after book. Monotony must be avoided. A pleasant voice, attractive presentation, apt examples, a sense of humor, stimulating questions, are desirable.

Finally, I wish to stress the importance of visual instruction. Here I shall refer to the use of lantern slides which I project in my Freshman lectures on Atomic Energy. The first of these are white on black so that the arrow in my luminous pointer shall show white against the dark back-ground. The subject matter

must be selected carefully and must be pertinent. The colored slides have been gathered from many sources. Color is psychologically important. It should be as accurate as possible. When I do not know the color of my subject I consult someone who does. While natural color photography is now possible, one cannot always afford the cost of the travel necessary to get the shots, and cannot, indeed, be present everywhere when they are available. I shall explain my method and purpose as the slides are shown.

(Dr. Silverman then demonstrated, with lantern slides, his method of instruction.)

Honorary AIC Membership Conferred on Dr. Silverman

HONORARY membership in THE AMERICAN INSTITUTE OF CHEMISTS was presented to Professor Alexander Silverman, F.A.I.C., head of the Department of Chemistry, University of Pittsburgh, for outstanding service as an educator, at a meeting of the Pittsburgh Chemists's Club, held February sixth at the College Club. The presentation of the certificate was made by Dr. Walter J. Murphy, Hon. AIC, substituting for AIC President Flett, who was prevented from attending by a railroad strike. Five speakers gave informal talks of a personal nature, followed by an address by Dr. Silverman on chemical education. Professor Silverman completed forty-five years of teaching service in the University of Pittsburgh last September.

Dr. Silverman received the Ph.B. and M.S. degrees from the University of Pittsburgh and the A. B. from Cornell University. He holds honorary D.Sc. degrees from the University of Pittsburgh and Alfred University.

Dr. Silverman was a member of the Division of Chemistry and Chemical Technology of the National Research Council from 1938 to 1941 and from 1947 to 1950. He has been chairman of the N.R.C. Committee on Data for Chemicals for Ceramic Use since 1938 and in this capacity



May all men know by this certificate that

Alexander Silverman

Who by lecture, by precept and by unselfish service to the profession has promoted a better understanding of applied chemistry has been elected an

Honorary Member

of

The American Institute of Chemists

In testimony whereof, we hereunto affix the seal of the Institute and our signatures this 6th day of February, 1951.



James Flett
PRESIDENT

Stephen Green
SECRETARY

New Honorary Membership Certificate

This is the new form of Honorary Membership Certificate which permits the inclusion of the individual citation. It was selected by Dr. Maurice J. Kelley, F.A.I.C., who was appointed by the National Council to make the selection.

has been responsible for the publication of N.R.C. Bulletins 107 and 118. He is a member of the N.R.C. Committee on Chemical Nomenclature and is vice-chairman of the Commission on Inorganic Chemistry of the International Union of Pure and Applied Chemistry, having been

HONORARY AIC MEMBERSHIP . . .

a delegate of the National Research Council and the National Academy of Sciences to the International Union meetings in Belgium 1930, Spain 1934, Switzerland 1936, Italy 1938, and England 1947. In 1949, at the Holland meeting, he presented the N.R.C. report for the naming of newly discovered elements and the rechristening of some older elements whose names had been in question. The recommendations were adopted by the International Union of Chemistry.

Dr. Silverman is a member of the American Chemical Society and in 1940 received the Pittsburgh Award of the Society. He is a Fellow of the American Ceramic Society and a past vice-president; a Fellow of the American Association for the Advancement of Science; a Fellow of the Society of Glass Technology of England; a member of the Deutsche Glastechnische Gesellschaft; the Society for the Protection of Science and Learning of England; the American Association of University Professors; Technion Society; the Pennsylvania Chemical Society; the Pennsylvania Academy of Science; the Washington Academy of Science; the Scientific Research Society of America.

Honors Society memberships include Sigma Xi, Omicron Delta Kappa, Phi Lambda Upsilon (National Honorary Member); also he

is a National Honorary member of Pi Lambda Phi.

His club memberships include the Cosmos Club of Washington and the Authors', Polygon, and Chemists' Clubs of Pittsburgh.

Professor Silverman has written extensively on education, microscope illumination, glass. He has more than two-hundred publications to his credit.



CCDA Meeting

The Commercial Chemical Development Association will meet March 21st at the Hotel Roosevelt, New York, N.Y., to discuss Government regulations which affect chemical industry. Dr. W. E. Kuhn, F.A.I.C., manager, Technical and Research Division, The Texas Company, is general chairman. The 1951 Honor Award of the Association will be presented to Francis J. Curtis, F.A.I.C., vice president and director of industrial preparedness, Monsanto Chemical Company. His acceptance address is entitled, "The Making of a Manager." The chairman of the morning session is W. H. Harding, F.A.I.C., director, Technical Service and Development, American Cyanamid Company. Reservations are being taken by G. O. Cragwall, executive secretary, c/o Charles Pfizer & Co., Inc., 11 Bartlett St., Brooklyn 6, New York.

Whitaker Receives Chandler Medal

Milton C. Whitaker, F.A.I.C., retired vice president of the American Cyanamid Company, New York, N.Y. received the 1950 Chandler Medal of Columbia University, at a meeting on January 14th. Dr. Grayson L. Kirk, vice president and acting head of Columbia, presented the award. Mr. Whitaker was the founder and former head of the Chemical Engineering Department of Columbia, from which he resigned in 1916 to become vice president of U.S. Industrial Alcohol Company and president of U.S. Industrial Chemical Company. He became vice president and director of American Cyanamid Company in 1930. He celebrated his eightieth birthday on December 16, 1950.

Mr. Whitaker's acceptance address was entitled, "Some Growing Pains of Our Chemical Industry."

J. T. Baker Appointment

J. T. Baker Chemical Company announces the appointment of G. B. Hafer as sales manager of the Laboratory Chemical Division. Mr. Hafer, who has been with the company twenty-five years, will replace H. B. Rasmussen, who has been appointed to a newly created position of manager of Government Business, with headquarters in Phillipsburg, New Jersey.

Blum Honored

Dr. William Blum, Hon. A.I.C., who received the first Gold Medal award of The American Institute of Chemists in 1926, chief of the Electrodeposition Section of the National Bureau of Standards, was elected an Honorary Member of the Electrodepositors' Technical Society of London. The Society, consisting of chemists, metallurgists, and other specialists in the electroplating field, has elected only six honorary members in its twenty-six years of existence.

Dr. Blum has been at the Bureau of Standards since 1909, where he has done research in electrodeposition, including electroplating, electrotyping, and electroforming. He has also contributed to the field of analytical chemistry.

Government Controls

Charles C. Concannon, F.A.I.C., spoke before the Synthetic Organic Chemical Manufacturers Association at its meeting, February 15th, in New York, N.Y., on government controls. He pointed out that no one can say how long a defense program will be necessary, nor how deeply such a program will cut into civilian goods production. The National Production Authority policy places emphasis on defense needs, with controls imposed only to the extent necessary. Consultations are held constantly with representatives of industry and trade.

This Year It's Niagara

Frederick L. Koethen, F.A.I.C.

Consulting Industrial Chemist, RFD No. 1, Niagara Falls, N.Y.

THE choice of Niagara Falls for the May, 1951, A.I.C. convention will assure delightful surroundings in a location of great scenic beauty, rich in historical associations and in the heart of the Electrochemical Industry.

Niagara Falls has been known as a summer resort since the early days before the War Between the States, when wealthy planters from the Old South were in the habit of registering at the famous Cataract House each year and spending much of the summer enjoying the cool weather. The industrial development of the Niagara Frontier has more or less eclipsed the tourist business (and there is nothing which annoys a loyal Niagara chemist more than to have people express the belief that he lives in a little town consisting of a row of hot dog stands and souvenir stores), nevertheless thousands of people still enjoy visiting Niagara because of the scenery and the climate.

The headquarters hotel, in addition to having a superb view of the Falls from its windows, adjoins the famous Oakes Garden, an outstanding example of the formal garden at its best. This garden was made possible by Sir Harry Oakes, who gave

part of his fortune made in Canadian gold mines, thus transforming the unsightly ruins left after the old Clifton House burned down. Even if you are like the average American who prefers informal gardens, you will like this formal one.

Queen Victoria Park occupies the entire Canadian shore from Lake Erie to Lake Ontario and includes the interesting restored forts, Ft. Erie and Ft. George on the two lakes, Queenston Heights with its magnificent view of Lake Ontario, Niagara Glen whose wooded depths will be ablaze with wild flowers in their natural settings, the Park's School for Gardeners with a very high reputation and beautiful grounds, the Greenhouse, and two restaurants where quiet separate dinner groups may enjoy lovely scenic surroundings.

Located as it is between Lake Erie and Lake Ontario where they overlap, these expanses of water have a tempering effect on the climate of the Niagara Peninsula. The summers are cool and the springs are late. May 9th is very likely to be in the middle of the rush of spring flowers and the parks will be at the height of their beauty. But visitors should bring a warm wrap to put on or take off.

On the American side of the River is Fort Niagara, which has been restored in accordance with the original plans found in 1918 in the French War Department Archives in Paris. Guides are provided to explain the various features, and most visitors find the Fort extremely interesting. In the Municipal Park of Niagara Falls, N.Y. is, among other things, a flock of Mallard ducks descended from a few eggs supplied by the Conservation Commission. These ducks are free to leave, but they have never migrated. Park attendants supply food, open water and shelter at night. When it comes time to be locked up at night (for protection), the resident ducks prevent the entry of any transient ducks who might be using the lake.

This earth is dotted with the remains of extinct cities which had outgrown their supply of fresh water. Several areas of the U.S.A. are commencing to worry about the same problem. But the Niagara Frontier has a supply of a quarter of a million cubic feet per second of cool fresh water. Aside from the power advantages, this feature is of great importance in planning a factory or a city, and its effect on the future growth is incalculable.

The Niagara River held a very important position in the early history of this continent because it was part of the easiest trade route to the interior. The entire Appalachian

Mountain Range was so thickly covered with trees that travel was mainly restricted to riverways, and all the other rivers, such as the James, Potomac, and Susquehanna led to much longer and more difficult portages. The Niagara Route was bitterly fought over and when Ft. Niagara fell to the British (1759), France gave up her hopes of "containing" the English Colonies on the Coastal Plain. From then until 1825, Lewiston at the beginning of the Portage was just about the busiest place West of the seacoast, with the passage of military groups, explorers, settlers, and fur traders.

The opening of the Erie Canal, in 1825, diverted the trade from the Niagara Portage and put Lewiston to sleep for nearly one-hundred years, until awakened as a residence section for the new industrial center.

During the American Revolution, the Niagara Peninsula was in British hands the entire time, so no actions occurred here except that it served as a base for Butler's Raiders and similar parties. After peace was declared, the British effort to retain this strategic area in spite of agreement (1783-1796) was one of the causes of the ill-feeling which culminated in the War of 1812. Numerous battles occurred here in that war, and nearly every house on the American Frontier was burned. Since then, this Frontier has been the world's

THIS YEAR IT'S NIAGARA!

most outstanding example of an unfortified boundary between two nations.

Although the earliest explorers recognized the vastness of the potential power at Niagara, only the power of the Rapids was used, from 1753 to 1875. At that time, the Hydraulic Canal, which runs overland from the Upper Rapids and discharges over the cliff, was put to work operating a flour mill. But none of these mills, was any different from other mills all over the world, and the total number of mills which could be built was limited by the mill-site area available on the banks. Only a very small part of Niagara's potential could be developed, until electrical transmission was available.

History was made in a big way when the Niagara Falls Power Company's plant was started up in 1895, the first large scale alternating current system, with three 5000 HP 25-cycle, three-phase generators.

Electrochemistry as a big industry was born at that moment. The power lines were extended to Buffalo in 1896, and the lavish use of electric lights on the Pan American Exposition buildings in 1901 caught the public imagination and ushered in the Electrical Age.

Hydroelectric power developments, first proved feasible at Niagara, have since been built all over the country in ever larger units. Hence, Niagara Falls is no longer statistically the

Electrochemical Center, but the accumulated know-how of a city of 100,000 still gives it a position of leadership.

Ralph Sockman, the noted Radio Preacher, when he came to Niagara Falls to preach a sermon in one of the local churches, stated, "The first time I came to the Falls, I was a green country boy; the second time I was on my honeymoon. This time I will do the talking."

A similar opportunity is presented to A.I.C. members on May 9th, 10th and 11th.

Guiteras Enters Consulting Field

Dr. Albert F. Guiteras, F.A.I.C., formerly connected with Foster D. Snell, Inc., has opened his own consulting laboratories, known as Hudson Laboratories, Inc., at 117 West 13th Street, New York 11, N. Y., where he specializes in industrial bacteriology in the food, drug, and cosmetic industries, particularly as applied to problems of disinfection, sterilization and sanitation. Dr. Guiteras received the B.S. degree from Lafayette College, Easton, Pa., and the Ph. D. degree from the University of Goettingen, Germany. His previous experience includes positions with Wallace & Tiernan Company, Inter-Chemical Corporation, H. D. Roosen Company, and Winthrop Chemical Company.

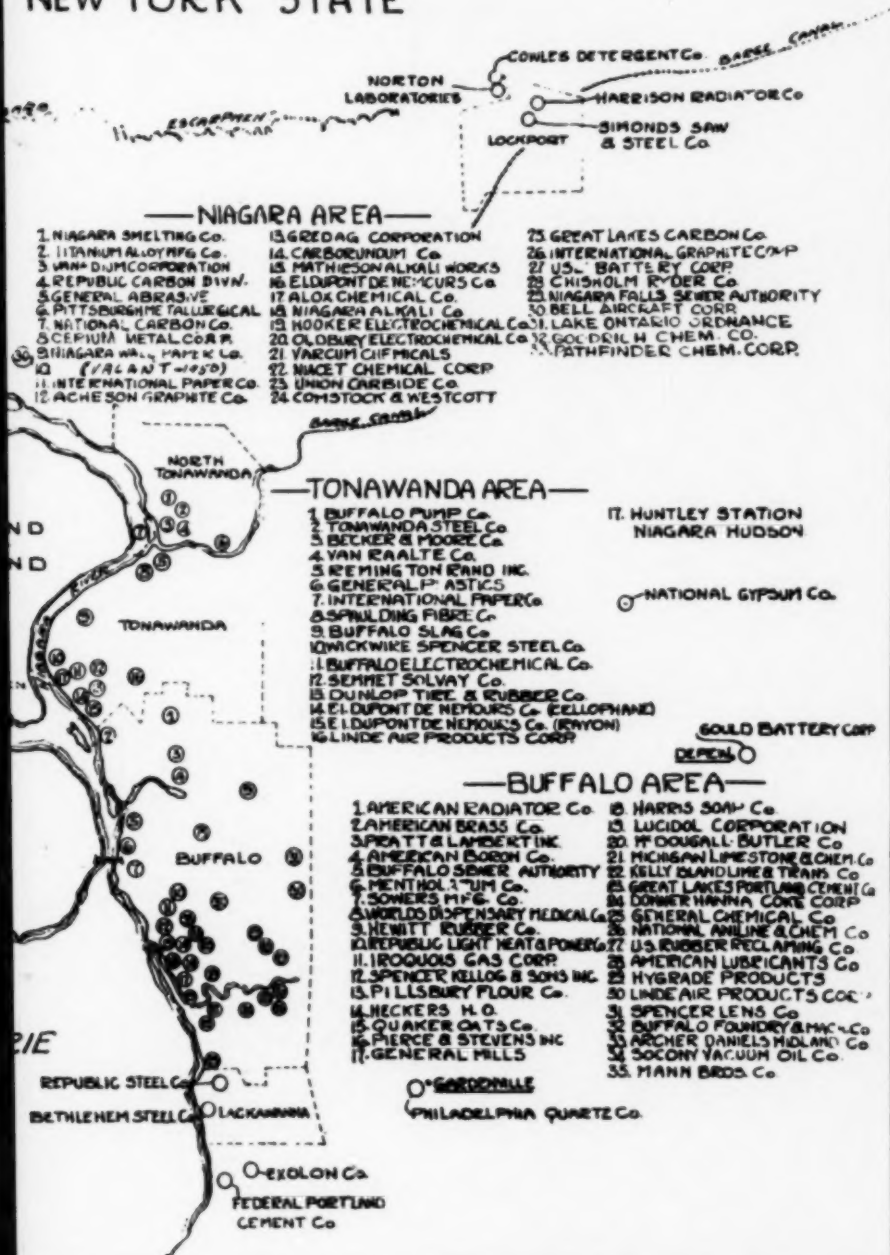
CHEMICAL INDUSTRY



THIS MAP SHOWS MOST OF THE LARGER
CHEMICAL PLANTS OF THE NIAGARA AREA

IN THE NIAGARA AREA

NEW YORK STATE



Curtis to Receive Honor Award

Francis J. Curtis, F.A.I.C., vice president, Monsanto Chemical Company, has been awarded the 1951 Honor Award of the Commercial Chemical Development Association, it is announced by F. A. Soderberg of General Dyestuff Corporation, president of the Association. The presentation will be made on March 21st, at the Roosevelt Hotel, New York, N.Y. Mr. Curtis will speak on "The Making of a Manager." Dr. W. E. Kuhn, F.A.I.C., is in charge of arrangements for the meeting, which will be devoted to the theme, "The Effect of Government Regulations on Commercial Chemical Development."

Hohenstein to Tour India

Dr. Raymond E. Kirk, F.A.I.C., dean of the Graduate School, Polytechnic Institute of Brooklyn, N.Y., announces that Dr. W. Peter Hohenstein, F.A.I.C., adjunct professor of chemistry at Polytechnic, will tour India during the next few months. While in Ahmedabad, he will supervise the opening and installation of a textile research institute. His work is part of a program to better the standards of living by bringing the research of other industrialized countries to bear on the industrial possibilities of India. On his return, Dr. Hohenstein plans to stop in Israel for a visit at the Weizmann Institute.

Nichols Medal to Eyring

The William H. Nichols Medal will be presented to Professor Henry Eyring, dean, Graduate School, University of Utah, at a meeting of the New York Section of the American Chemical Society to be held at the Hotel Statler, New York, N.Y., on March ninth. John H. Nair, F.A.I.C., will preside. Dean Hugh S. Taylor, Graduate School, Princeton University, will speak on "The Medallist and His Scientific Accomplishments." The medal will be presented by Dr. Raymond E. Kirk, F.A.I.C., chairman of the Jury of Award. Prof. Eyring's acceptance address will be on "The Absolute Rate Theory in Chemistry and Border Line Fields."

Twenty-fifth Anniversary

Alpha Epsilon Delta, the national premedical honor society, will celebrate its twenty-five years of service to premedical students at its Anniversary Convention, March 21st to 22nd at the University of Alabama, to be followed by the Fourth Regional Conference on Premedical Education, March 23rd and 24th. Dr. Emmett B. Carmichael, F.A.I.C., is national councilor of Alpha Epsilon Delta; Dr. Maurice L. Moore, F.A.I.C., is national secretary. The society has a membership of nearly 10,000, in approximately sixty student chapter groups.

Communications

The Classification of Chemists

To the Editor:

I have read the information about the American Board of Clinical Chemistry, Inc., (See *THE CHEMIST*, February, page 69, or "The Chemical World This Week" in *Chemical & Engineering News*, Dec. 18, 1950.)

It appears that the salient objective of the forming of this organization is to rate or classify chemists for the performance of a relatively high order of chemical laboratory operations. The requirements for membership appear to be quite high, as the educational essentials seem to indicate a doctorate degree from a properly accredited institution, and in addition a nominal amount of laboratory experience such as would be essential for clinical chemical work. It is noted with gratification that the term equivalent to a doctorate degree is stressed, and this is indeed a worthwhile step forward.

In summing up this entire matter, it appears that the basic objective of this organization is substantially to classify or rate chemically trained men. As no state in the union at the present time requires the licensing of chemists, the two present procedures of officially classifying chemists is either through *THE AMERICAN INSTITUTE OF CHEMISTS* or the Civil

Service Department of our federal or state governments. The American Board of Clinical Chemistry would be another agency doubtlessly properly constituted to perform this same function, viz. to classify or provide credentials for chemists. As this activity is substantially and satisfactorily performed by the AIC, it would appear that the A.B.C.C. would be largely reproducing or duplicating the service. There may be some petty differences in the objectives of the two institutions, nevertheless their work doubtlessly runs very nearly parallel. However, if I am wrong, I will be pleased to be enlightened on this point.

In lieu of lack of licensing, it is now wholly within the power of any individual, with or without adequate education and/or satisfactory experience, to classify himself as a "chemist", and there are no regulations, legal, or otherwise, that could prevent him from so classifying himself. Obviously, if the chemist is to be classified as a professional individual, it would become primarily essential to first define a chemist, and second, his functions, and third, to provide a properly qualified group of individuals to evaluate and classify applicants who desire such classification.

Without again debating the question of licensing, registering, or certifying, it is apparent that this function

is one of the outstanding contributions made by the AIC toward the professionalization of the chemist. I have brought out this point forcefully to young chemists entering the profession and to many others already within this group, and I believe it is part of an educational campaign to enlighten the public that there is a properly credentialed organization to classify individuals who indicate their desire for such classification. This is an important measure at the present time, when it is considered that many young men may claim exemption from active military duty on the grounds that they are chemists and doing important industrial work requiring this background of training.

—H. A. Levey, F.A.I.C.

Historical Material Requested

To the Editor:

I am gathering material for a brief history of the firm of Eimer & Amend, now a hundred years old and a division of Fisher Scientific Company, and I am writing to ask your help and that of the readers of *THE CHEMIST*.

This old firm was close to, and played an important role in, a great many of the significant developments in chemistry during the century of its life. Mr. Edison and Dr. Chas. F. Chandler, among many others, were constant customers and depended on E&A for both chemicals and

apparatus. There are many other similarly important and interesting services that the old firm rendered during its long fruitful life. I am anxious to get together as much material on this subject as possible covering the period before 1900. I would value and treasure old catalogs, bills, letters, and similar material. The loan of such items with permission to photostat them would be greatly appreciated and acknowledged in the final published history.

Be sure any help you can give me in this interesting task will be greatly appreciated.

—D. H. Killeffer, F.A.I.C.

Do You Want a Chemists' Page?

To the Editor:

Recently the New York Chapter held a dinner meeting at which ninety-two guests were present. Had the meeting not been the occasion to honor Dr. Jerome Alexander, I presume the attendance would probably have been about fifty to sixty guests, or less than ten per cent of the New York Chapter's membership. There no doubt are a number of reasons why more members do not attend dinner meetings, but I believe the main one is the expense of such dinners, viz. six dollars.

This situation has caused me to think about ways the members of our association could be more helpful to each other. My reasoning runs as

COMMUNICATIONS

follows. Most members of our organization join because of the desire for fellowship, i.e., friends having mutual interests. In short, our association affords a chance to make new friendships. Such friendships are best made on a personal, face-to-face introduction, but the opportunities for such meetings are discouraging because of the six-dollar dinners, lack of time, etc.

Therefore, I began to wonder if a true fellowship spirit could not be aroused among our membership in spite of the lack of opportunity for the individual members to meet one another face-to-face. It seems to me this is possible by means of our publication, *THE CHEMIST*, which affords a means of entering our thoughts. However, "canned" articles, to paraphrase a lawyer's term relating to "canned" briefs, do not effect such friendship.

Wherefore, it is suggested that a page or two be set aside in *THE CHEMIST* for letters of intercommunication between members. These letters could be on most any subject of interest to the chemist. The purpose being to arouse friendly discussion and response, and thereby build up friendships and at the same time receive beneficial advice or information.

For example, if Dr. E. Farber's article on "Should We File A Patent Application," January issue of *THE*

CHEMIST, had been submitted for discussion as a contribution to, for example, a section known as The Chemists' Corner (or Page), I believe many responses would be evoked. Note that The Chemists' Page is entirely different from "Letters to the Editor." The Chemists' Page would be in effect, Open Letters to Other Chemists. Through such "Open Letters" as contemplated, our membership could discuss topics of various interests relating to chemistry or the lives of chemists. Topics as remote as the moral guilt (if any) that chemists have for the mass slaughter of 200,000 civilians at Hiroshima, including over 6000 pregnant women, could be submitted for discussion; as well as more specific questions, for example, as the worth of the patent system to our society or civilization; and even such calls-for-help as where a member chemist could purchase a relatively rare chemical or locate a reference to a particular chemical (or use of such a chemical).

Such "Open Letters" are in reality "Letters Patent" to other chemists, and it seems to me they could bring about worthwhile discussion among our membership, lead to friendship, and be beneficial in disseminating facts and knowledge.

A reader's reaction to the above suggestion would be appreciated.

—Dr. Frank Makara, F.A.I.C.

Carbon Dioxide in Blood

To the Editor:

In Dr. Podolsky's article, in *THE CHEMIST* for August 1950, page 323, on "The Chemistry of Intelligence", he states:

"The amount of carbon dioxide in the blood exerts appreciable effects on intelligence. A simple experiment is the following: Pant for about three minutes. This *increases* the amount of carbon dioxide in the blood . . ."

If a persons pants for three minutes he should *decrease* the carbon dioxide in the blood. Voluntary panting is voluntary hyperpnea which textbooks explain as a "washing out" of carbon dioxide from the blood. In this type of hyperpnea there is an excretion of basic components and a lowering of the alkali reserve after a short time. The pH of the blood in these cases tends to remain normal.

—Dr. M. Starr Nichols, F.A.I.C.

Correction

To the Editor:

In your issue of *THE CHEMIST* for December 1950, you were good enough to notice one of our publications entitled "Cosmetic Materials" by R. G. Harry, on page 494.

We would like to point out that the name of this organization is Leonard Hill Limited, and not Leonard Hill as printed in your journal. Perhaps you could kindly insert a correction at some future date.

—R. G. Thixton

Leonard Hill Limited

Tower Laboratory

Dr. Roger Adams, Hon. AIC, head of the Chemistry Department of the University of Illinois, was the principal speaker at the dedication of the new Research and Development Tower of S.C. Johnson & Son, Inc., on November 17th. The extraordinary laboratory is 153 feet high, with hanging walls of brick and horizontal glass tubing, supported by a hollow steel-reinforced concrete core. It was designed by Frank Lloyd Wright. At the dedication luncheon, Herbert F. Johnson, president of the company, and grandson of S.C. Johnson, founder of the firm, introduced Mr. Wright and Dr. J. Vernon Steinle, F.A.I.C., research and development vice president of the firm. Dr. Steinle joined the company in 1925, when there were only three chemists compared to the more than eighty at present. He was made director of research in 1933, and vice president in June, 1950.

Mexican Subsidiary

Foster D. Snell de Mexico, S. de R. L. of Apartado 20.609, Mexico City, has been formed, according to an announcement by Dr. Foster Dee Snell, F.A.I.C., of Foster D. Snell, Inc., New York, N.Y. The new firm will confine its activities to consulting, development, and engineering problems in Central America. Messrs. J. Carner and J. Sperling are in charge of the new subsidiary in Mexico City.

Necrology

William H. Gabeler

William H. Gabeler, manager of the Phosphate Rock Division of the Davison Chemical Corporation, Bartow, Florida, died on April 29th, 1950, at the age of fifty-nine.

He was born in Lawrence, Mass., and was graduated from the Massachusetts Institute of Technology.

His experience, in addition to that with Davison Chemical Corp., included work with the Shawinigan Water & Power Co., Cedar Rapids Water & Power Co., the Barrett Co., Pennsylvania Water & Power Co., and as vice president of the Summers Fertilizer Co., Inc. He served with the U.S.A. Air Service in France, 1918-19.

His specialties were metallurgy, contact acid plants, silica gel, granular superphosphates, and homogenous fertilizers.

He was a member of Theta Xi, the Engineers Club, and the Baltimore Country Club. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1937.

Vittorio Molinari

Vittorio Molinari, head of the Organic Chemicals Division of the Development Department of Bakelite Division, Union Carbide and Carbon Corp., died January 23, 1951, of a heart attack, at the age of fifty-four,

at his home in Plainfield, N.J.

He was born in Piovene, Italy, the son of Ettore Molinari, eminent Italian industrial chemist. He received the doctorate in chemical engineering from the Polytechnic Institute of Milan, Italy, in 1919, and was employed as a chemical engineer in Italy as well as serving as professor before coming to the United States.¹

Since 1930, he had been connected with the Bakelite Division of the Union Carbide and Carbon Corporation.

He was internationally known as a consultant. His specialties were coal tar derivatives, tar acids, phenol formaldehyde resins and raw materials.

He was a member of the American Chemical Society and the Society of Chemical Industry. He became a FELLOW OF THE AMERICAN INSTITUTE OF CHEMISTS in 1936.

Charles A. Mann

Charles A. Mann, chief and professor of chemical engineering, of the University of Minnesota, died June 16, 1950, at the age of sixty-four. He was born in Milwaukee, Wisconsin. He received the B.S. in Ch.E. from the University of Wisconsin, from which he also received the M.S. and Ph.D. degrees.

From 1911 to 1916, he was instructor in chemical engineering at

the University of Wisconsin. He was head of the Chemical Engineering Department at the Iowa State College from 1916 to 1919. He joined the Chemical Engineering Department of the University of Minnesota in 1919, later becoming chief and professor of chemical engineering. He also maintained a consulting service after 1911. He was the author of a number of papers on electrolysis, North Dakota lignite, and corrosion inhibitors.

He was a member of The American Association for the Advancement of Science, The American Chemical Society, The American Institute of Chemical Engineers, The Engineering Society, The Institute of Food Technology and The Society of Chemical Industry. He was elected to Fellowship in THE AMERICAN INSTITUTE OF CHEMISTS in 1944.

Emil K. Ventre

Emil K. Ventre, senior chemist at the Sugar Experimental Station with the U.S. Department of Agriculture, Houma, La., died October 14, 1950, at the age of fifty-one. He was born in Opelousas, Louisiana. He received the B.Sc. degree from Louisiana State University where he also did graduate work in Sugar Technology.

His first position was with B. F. Drakenfeld & Co. as analytical chemist. In 1920, he joined the Meeker Sugar Co. as sugar control chemist, and in 1921, he became chief chemist

for Terrebonne Sugar Co. Other experience included work with Acadia Sugar Refining Co., as superintendent of white sugar manufacture; as chief chemist of the United Fruit Co.; with Cenclare Sugar Co., as chief chemist; with the Cuban American Sugar Co. as sugar technologist; as chemist in charge of the Public Health Laboratory of the New Mexico Department of Health; chemist in charge of a clinical laboratory in Shreveport, La.; chemist in charge of the Public Health Laboratory of the Louisiana State Board of Health. In 1928, he again returned to sugar technology, with the exception of a year as superintendent of a water purification plant in the City of Monroe, La.

He was a member of the American Chemical Society. He was elected a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1937.

Uranium Extraction Process

The Atomic Energy Commission announces that it has developed a process whereby uranium, a minor component in phosphate deposits of the Northwest and of Florida, can be extracted economically in the production of triple superphosphate.

Merck Purchases Marine Magnesium

Merck & Company, Rahway, N.J. has purchased Marine Magnesium Products Corporation of South San Francisco.



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President-elect, Lincoln T. Work

Secretary, Lloyd Van Doren
Treasurer, Frederick A. Hessel

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Raymond Stevens
New England Chapter
Florence E. Wall, *At-Large*
James R. Withrow, *At-Large*

Cortisone Patents

Four chemical and pharmaceutical companies working with Research Corporation have concluded an important agreement making available their patents for the manufacture of cortisone to the entire pharmaceutical industry, thus paving the way for increased production. The companies are Ciba Pharmaceutical Products, Inc., Merck & Co., Inc., Organon, Inc., and Schering Corporation. Information may be obtained from the Division of Patent Management, Re-

search Corporation, 405 Lexington Ave., New York 17, N. Y.

Withrow Honored

Dr. James R. Withrow, Hon. AIC, emeritus professor and former head of the Department of Chemical Engineering at Ohio State University, was awarded a scroll, December fourth, by the Central Ohio Section of The American Institute of Chemical Engineers, in recognition of his pioneering work in chemical engineering education in Ohio.

AIC Activities

C. P. Neidig, F.A.I.C.

Alabama

This newest of Chapters held its first organization meeting on October 17th, 1950, at the Jefferson Hospital, Birmingham, Alabama. The following officers were elected:

Chairman,

Dr. Emmett B. Carmichael,

Vice Chairman,

Dr. Stewart J. Lloyd

Secretary-Treasurer

Dr. Warner W. Carlson

Representative to National Council,

Dr. Emmett B. Carmichael

Chicago

Chairman, Bruce M. Bare

Chairman-elect,

Dr. W. B. Hendrey

Vice Chairman, B. S. Friedman

Secretary-Treasurer,

Dr. Glen Hedrick

Representative to National Council,

Dr. Gustav Egloff

The Chicago Chapter held an open meeting on January 19th. This was the first of two meetings on the general subject, "Are Chemists Rewarded for Their Role in Creating New Wealth?" Speaker for the evening was Clifford A. Hampel, supervisor of extraction metallurgy, Armour Research Foundation. His subject was "Case Histories of the Chemist as a Dollar Producer." A short discussion period followed Mr. Hampel's talk.

New Jersey

Chairman, C. A. Amick

Chairman-elect, P. J. Gaylor

Secretary, Dr. H. W. Mackinney

Treasurer, Dr. E. R. Hanson

Representative to National Council,

Harry Burrell

Panel Discussion on Teacher's Colleges

The March meeting of the New Jersey Chapter will be a panel discussion on the physical needs of the New Jersey State Teachers Colleges. The meeting will be held, March 29th, at 8 p.m., at the Public Service Auditorium, 80 Park Place, Newark, N.J., and will be open to the public.

The speakers will be: Honorable Grace Freeman, chairman, Education Committee, Assembly of New Jersey; Senator Kenneth C. Hand, chairman, Education Committee, Senate of New Jersey; Carlton W. Tillinghast, executive-director, New Jersey Taxpayers Association, and Dr. John H. Bosshard, Commissioner of Education. Opportunity will also be provided for questions.

Two years ago a committee of the N. J. Chapter inspected the facilities for teaching science and training high school teachers at State Teachers College, Montclair, N.J. The committee found an excellent faculty handicapped by the State's failure to provide adequate facilities. The present buildings were built many years ago to accommodate one-third

AIC ACTIVITIES

of the present enrollment. They are antiquated and in part "temporary". Several reports, including one in *Life Magazine* (October 16, 1950), concurring in general with the Chapter's findings, have since appeared, but there has been no move by the State's Administration toward improvement. Recently proposals for a thorough rehabilitation of all the New Jersey State Teachers Colleges have been made by Miss Freeman and others. The purpose of the meeting is to consider these proposals and other aspects of the problem.

Prior to the meeting, an informal dinner (optional, about \$2.00) will be given for the speakers and members at the Military Park Hotel, Newark, N.J. at 6:30 p.m. Reservations should be made to W. H. Smyers, Elizabeth 5-2000, Ext. 855.

New York

Chairman, Dr. M. J. Kelley
Vice Chairman, Dr. A. F. Guiteras
Secretary-treasurer, G. A. Kirton
Representative to National Council,
Karl M. Herstein

Selective Service and Scientific Personnel

The New York Chapter will meet Thursday evening, March 29th, at the Hotel Commodore, New York, N.Y., to hear a discussion panel on "How Selective Service Will Affect Scientific Personnel." The speakers

will be Col. Candler Cobb, director of Selective Service for the New York Area; Col. C. E. Davies, program director for the Engineering Manpower Commission, and Dr. L. H. Farinholt, associate professor of chemistry at Columbia University.

The program, one of vital interest to all scientific personnel eligible for military service, as well as to the companies for whom they work, was arranged by Dr. Robert Ginell, F.A.I.C., of the Department of Chemistry, Brooklyn College. The meeting is open not only to AIC members but to all students, chemists, scientific personnel and company representatives who are interested in the problem. The price of admission is \$1.50. Information and reservations may be secured from Dr. Albert F. Guiteras, F.A.I.C., president, Hudson Laboratories, Inc., 117 W. 13th St., New York 11, N.Y.

Increased Interest

Dr. Charles J. Marsel, F.A.I.C., chairman of the Student Relations Committee of the New York Chapter, AIC, reports that young chemists are showing an increased interest in the activities of the Institute, and are attending AIC meetings in greater numbers than ever before.

This interest, Dr. Marsel said, definitely reflects the increase in the number of chemistry students in the postwar years. "Our Young Chemists

Meeting last month brought an attendance of 131 compared with 119 who attended the previous meeting. Students from sixteen local universities were present at the meeting which featured talks by personnel managers of six large chemical companies."

Pennsylvania

Chairman, C. P. Neidig
Vice Chairman, Ronald J. Baird
Secretary-treasurer, John H. Staub
Representative to National Council,
Hillary Robinette

On February first, the Pennsylvania Chapter met to hear an address by Dr. James R. Dudley, F.A.I.C., supervisor, New Product Development, American Cyanamid Company, on "Acrylonitrile and its Newer Derivatives." His extremely interesting talk was followed by an extended discussion period.

Washington

Chairman, Louis N. Markwood
Vice Chairman,
Elizabeth M. Hewston
Secretary, Paul E. Reichardt
Treasurer, Dr. R. C. Roark
Representative to National Council,
L. N. Markwood

A luncheon meeting of the Washington Chapter was held on January 30th, with approximately twenty-five members and guests in attendance.

Following the luncheon, there was an open discussion of the Institute's publication, *THE CHEMIST*. The members agreed that everyone should cooperate to send in news items, articles, suggestions, etc., to enable *THE CHEMIST* to express more completely the wishes of the membership in its content. *THE CHEMIST* welcomes material submitted by AIC members on professional subjects.

Electrochemical Society to Meet

Over one-hundred and twenty technical papers will be presented at the 99th meeting of The Electrochemical Society, to be held at the Wardman Park Hotel, Washington, D.C., April 8th to 12th. Sessions on electric insulation, luminescence, rare metals, electrothermics, and theoretical electrochemistry are scheduled. Copies of the program booklet may be obtained from Henry B. Linford, Secretary, The Electrochemical Society, 235 West 102nd Street, New York 25, N.Y.

Dedication

The University of Illinois will hold a two-day program March 30th to 31st to dedicate its \$3,400,000 East Chemistry building.

Dr. Roger Adams, Hon. AIC, Dr. Donald B. Keyes, F.A.I.C., Dr. Edward A. Doisy, F.A.I.C., and Dr. S. Kirkpatrick, F.A.I.C., are among the speakers.

Opportunities

Doris Eager, M.A.I.C.

Positions Available

Chemist: B.S. in physical chemistry, research assistant. Phila. Salary to \$3,600. Box 31. THE CHEMIST.

Biochemist: M.S., research, analytical. Experience on odor masking materials. N.Y.C. Salary to \$4,500. Box 33. THE CHEMIST.

Chemist: Knowledge of economics, statistics, able to determine chemical markets, feasibility of chemical processes. Familiar with market research procedures, sources of data and capable technical writer. N.Y.C. Salary to \$4,800. Box 35. THE CHEMIST.

Senior Research Engineer: Ph.D. in physical chemistry. Rheologist. Experience in asphalts. Salary \$7,500. Box 37. THE CHEMIST.

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Biochemist Ph.D., F. A. I. C., with exceptional background, desires position as director of New Products Development and Research in Pharmaceutical, Food or related field. Location immaterial. Reply Box 30, THE CHEMIST.

Chemist, B.S., M.A.I.C. Age 35, with previous sales experience, one year insecticide research, two years on oils, fats and waxes, and two years in present research position, feels he is well qualified for technical sales position. Reply Box 32, THE CHEMIST.

Market Development: Ph.D. F.A.I.C., Extensive knowledge of new markets for chemical products. Familiar with government systems of controls, defense demands and methods for meeting shortages. Technical Consultant on new products development. Knowledge of sources of information, especially those of chemical markets. Excellent research background and supervisory ability. Numerous patents and publications. Reply Box 34, THE CHEMIST.

Research Fellowship

Establishment of a new fellowship by The Quaker Oats Company, Chicago, Illinois, for research on uses for by-products from the manufacture of furfural, was announced by Dr. Edward R. Weidlein, F.A.I.C., director, Mellon Institute, Pittsburgh, Pa.

Gas Technology Fellowships

The Institute of Gas Technology is accepting applications for graduate fellowships in gas technology. Fellowships include an award of \$1,250 and tuition for the first two years, as well as summer employment by the sponsoring company. They are open to seniors and graduates in chemistry, chemical engineering, mechanical engineering, petroleum engineering, and related fields.

Requests for information should be addressed to The Director, Institute of Gas Technology, Chicago 16, Illinois.

Industrial Research Fellowships

Industrial research fellowships in physics, chemistry, metallurgy, ceramics, mechanics, and electrical engineering, are offered by Armour Research Foundation of Illinois Institute of Technology, to U.S. citizens, under twenty-eight years of age, who are graduates of accredited schools.

Request information from the Office of Admissions, Graduate School of Illinois Institute of Technology, Chicago 16, Ill.

Pennsalt Scholarship

George B. Beitzel, Pennsalt president, has announced an annual \$300-a-year college scholarship to be awarded to employee's sons and daughters. This scholarship will be awarded on a competitive basis upon graduation from high school.

Maine Pulp & Paper Foundation

The University of Maine Pulp and Paper Foundation, started one year ago, has enlisted the cooperation of alumni and the pulp and paper industry to such an extent that this past Fall six one-thousand dollar scholarships were awarded, with additional scholarships available for next year, it was announced at a luncheon in New York, February 21st. Professor John B. Calkin, F.A.I.C., is an active committee member of the Foundation. The Foundation's first Honor Award was presented to Dr. Ralph H. McKee, "in recognition of his initiating and establishing the first college course of pulp and paper technology in the country at the University of Maine."

Industrial Training for Professors

Granville M. Read, chief engineer of E. I. du Pont de Nemours & Co., Inc., speaking at Case Institute of Technology, appealed to educators to "come and work with us in industry".

He outlined a proposed offer to be extended by the du Pont Company to professors of engineering schools. The program would consist of twelve months of industrial engineering training, with salary plus expenses. The means of selecting the professors, and what schools are to be included in the program, are yet to be decided.

OPPORTUNITIES

Research Corporation Grants

The Research Corporation has allocated sixty-two grants-in-aid of scientific research to colleges, universities, and scientific institutions in twenty-seven states, which total more than \$700,000, in the fields of physics, chemistry, mathematics and engineering.

Among them are awards to Dr. Ulrich P. Strauss, A.A.I.C., of Rutgers University for "Polysoaps", and to Dr. Irving A. Kaye, F.A.I.C., of Brooklyn College, for "Preparation of Aminoethers".

Chemical Engineering Achievement

The Chemical Engineers of Greater New York have created an annual "Achievement Award," to give recognition to young men in the profession for exceptional service to humanity or for outstanding professional achievements. Any chemical engineer thirty-two years of age or under, working in the New York-New Jersey-Metropolitan area, is eligible. Nominations for the award are invited from all manufacturers, research laboratories, colleges and universities, professional groups, and trade organizations in the area. Nomination blanks may be obtained from Dr. Sidney D. Kirkpatrick, F.A.I.C., McGraw-Hill Publishing Company, 330 West 42nd St., New York, N. Y.

Training Program

The U. S. Atomic Energy Commission announces that industrial organizations interested in obtaining special training in nuclear reactor technology for engineers in their employ are invited to sponsor their enrollment in the 1951-52 session of the Oak Ridge School of Reactor Technology. Applications must be in by April first. Information and application forms may be obtained from the Director, Oak Ridge School of Reactor Technology, P.O. Box P, Oak Ridge, Tenn.

Fellowships for Science Teachers

Dr. Elmer Hutchisson, acting president of Case Institute of Technology, announces that fifty all-expense fellowships for science teachers have again been made available by the General Electric Company this year.

N. Y. Offices Moved

The Patterson Foundry & Machine Company, East Liverpool, Ohio, announces the removal of the New York district offices to new and larger quarters in Suite 5115, Empire State Building, New York, N.Y.

New Corporation Formed

The Pure Drug and Chemical Corporation has been formed as a subsidiary of United Dye & Chemical Corporation, with executive offices at 285 Madison Ave., New York, New York.

For Your Library

Ion Exchange Resins

By Robert Kunin and Robert J. Myers.
1950. John Wiley & Sons, Inc. 212 pp.
6" x 9 1/2". \$4.75

Two research chemists, connected with Rohm and Haas who have done a great deal of work in the field of ion exchange have collaborated on this book to provide the scientist and engineer with reliable and up-to-date information on a phenomenon which is finding increasingly wider applications. Besides dealing with the theory underlying the mechanism of ion exchange and the various uses of these resins, the book includes operational engineering data as well as methods of using the resins, in both laboratory and industry. Of particular interest is the considerable amount of the authors' own unpublished data on the subject.

The full bibliography appendix, author and subject indices add to the value of this comprehensive study which is well illustrated by charts and photographs.

—Dr. Frederick A. Hessel, F.A.I.C.

Quantitative Ultramicro-analysis

By Paul L. Kirk. John Wiley & Sons. 310 pp. 5 3/4" x 8 1/2". \$5.00

Take a milligram of material, weigh it with an accuracy of 1.005 micrograms, and subject it to gravimetric, titrimetric, colorimetric and physical methods. Micro-filters, microheaters, microcentrifuges, stills, water baths and similar micro equipment are well described; methods for calcium, iron, nitrogen bodies, reducing sugars, and volumetric gas analyses. Respirometry of a single cell and sub-microgram spectrophotometric methods are given. The book elicits admiration.

—Dr. John A. Steffens, F.A.I.C.

New Atoms

Progress and Some Memories. By Otto Hahn. A collection of papers edited by Dr. W. Gaede, Amsterdam. (Printed in the Netherlands). Elsevier Publishing Co., Inc., 1950. 184 pp. \$1.75.

A translation into English from the Dutch and German editions, the book

consists of Hahn's Nobel lecture (1946), two other lectures given before German engineers and chemists (1947), and some personal recollections concerning natural radioactivity in commemoration of the 50th anniversary of the discovery of radium (1948), in which Hahn describes his own "transmutation" from an organic chemist into a "radioactive chemist", under the guiding influence of Ramsay and Rutherford. Characteristic of Hahn's method of approach is the handling of the first assignment given him by Ramsay, namely to isolate the radium from about 100 grams of a salt of barium. "The final result of my work was not the preparation in a pure state of presumably 9 mg of radium but the discovery of a new 'radioelement',—radio-thorium. The isolation and identification of the products of fission from the neutron bombardment of uranium was no accident. Here again it was chemical reasoning, implemented by the techniques of radioactivity, which brought results in a field that had been worked over since 1934 by some of the best nuclear physicists of the times in the vain pursuit of transuranic elements. The results did not make sense, particularly chemical sense. It is interesting to read Hahn's version of the steps taken (with F. Strassmann) to differentiate between radioactive barium and radium, which was the crux of the matter; thereafter followed in quick succession, strontium, lanthanum, xenon, ytterbium etc. Sections on the hydrogen-isotope bomb and on elements 97 and 98 have been added to the English edition by the author.

—Dr. E. E. Butterfield, F.A.I.C.

Progress in Biochemistry

By Felix Haurowitz. Interscience Publishers, Inc. 405 pp. 5 3/4" x 9". \$7.50.

This is an interesting survey of biochemistry covering the field since 1939. The first three editions of this book were published in 1924, 1931, and 1938, in Prague, and the fourth in Switzerland in 1948. The twenty-four chapters deal with practically every phase of chemistry that concerns living things. The reviewer feels that every chemist should own a copy of this valuable book.

—Dr. Henry Tauber, F.A.I.C.

Actas y Trabajos del Tercer Congreso Peruano de Quimica

Held in Lima, Peru, Oct. 17-23, 1949. Sociedad Quimica del Peru. Apartado Correo 891, Lima. Two volumes. 876 pp.

Contains a summary of general proceedings and twelve technical sections covering physical, organic, inorganic, biological, analytical chemistry and related industries. Numerous interesting papers were presented. From the point of view of the "Chemist" the proceedings of Section 12 were particularly significant. Five papers were presented including one covering a proposed code of ethics (which in many respects is similar to ours). Also noteworthy was a paper discussing methods of classifying employees and laborers in chemical plants. We were pleased to find in one of the general papers presented by the president of the delegation of the State University of Trujillo a lengthy quotation from a speech by a former president of the INSTITUTE and mentioning that title.

—Dr. Frederick A. Hessel, F.A.I.C.

Chemical Books Abroad

Rudolph Seiden, F.A.I.C.

Vandenhoeck & Ruprecht, Goettingen: *Technisches Fachwoerterbuch der Grundstoff Industrie; I: English-Deutsch*, by Gotthard Lenk and Hans Boerner, 1949, 568 pp., DM 49.80. The English-German part of a dictionary containing 45,000 technical terms used in mining and metallurgy, including their auxiliary branches of engineering, and common and commercial terms employed for raw materials or finished products of minerals and metals. The last 165 pages of the book list symbols and abbreviations and bring many conversion tables.

Verlag Wilhelm Maudrich, Wien: *Medizinische Chemie*, by Fritz Vering, 1950, 493 pp. with 138 ill. and 390 tables, S 190. A tremendous amount of chemical knowledge is condensed into this outstanding chemical textbook for medical and pharmaceutical students; nevertheless, chemists may use it with profit, too. In addition to 325 pages on general, inorganic, and organic chemistry, the book contains 73 pages on biochemistry and 70

pages of working methods for the medical-chemical laboratory. The author, who expresses himself with felicity, uses many excellent pictures and expertly arranged tabular material to illustrate the text, which he presents in a concise, clear-cut manner. But the title of the book (Medical Chemistry) seems ambiguous.

Friedr. Vieweg & Sohn, Braunschweig: *Anorganische Chemie*, by Karl A. and Ulrich R. Hofmann, 13th ed., 813 pp. with 103 ill., DM 25. The "Hofmann," for many years, has been known to German-reading students as one of the best textbooks on inorganic chemistry. The new edition is a reprint of the last revised (10th) edition of 1943.

Verlag Moritz Schaefer Leipzig: *Studien ueber die Natur der Bromatwirkung*, by Holger Jorgensen, 1945, 389 pp. with 74 ill. and 92 tables, DM 29. A detailed account of the influence which the smallest amounts of bromates exert on the improvement of the baking properties of flour. This is an authoritative book of value to cereal chemists working in laboratory, mill, or bakery.

J. & A Churchill Ltd., London (The Blakiston Co., Philadelphia): *Recent Advances in Chemotherapy, I*, by G. M. Findlay, 3rd ed., 625 pp., \$7.50. Until now, this work appeared in one volume, but the new edition will be printed in four volumes, so as to make it possible to treat adequately the many advances in modern chemotherapy. The first volume reports on the progress made in the last decade in the chemotherapy of scabies, helminthic and protozoal diseases. Hundreds of literature references and complete author and subject indexes greatly increase the value of this survey, indispensable to pharmaceutical-chemical research workers.

Verlag Chemie, Weinheim/Bergstr.: *Neuere Methoden der praeparativen organischen Chemie, I*, by W. Forest, 3rd ed., 570 pp., DM 10.40. A collection of articles about newer methods for the preparation of organic chemicals. They were originally printed in "Die Chemie" in 1940/43 and are concerned with oxidation; dehydrogenation; hydrogenation; reduction reactions; substitutions; introduction of F or SCN; Dien synthesis; synthesis with diazomethane or Li-organic

compounds; BF_3 as catalyst; preparation of pure proteins; molecular distillation; and chromatographic adsorption • *Die Welt der chemischen Körper bei hohen und tiefen Temperaturen und Drucken*, by Ernst Jaencke, 1950, 122 pp. with 82 ill. and 182 tables, DM 12.20. An investigation (with a minimum of mathematics) of the behavior of 167 elements and inorganic compounds and of 45 organic substances exposed to extreme temperatures and pressures.

Wissenschaftliche Verlagsgesellschaft, Stuttgart 1: *Paul Ehrlich*, by Hans Loewe (1950, 255 pp., 17 ill., DM 9.50). Discoverer of salvarsan and founder of the all-important chemotherapy, Paul Ehrlich (1854-1915, Nobel prize 1908) was one of the few physicians who contributed much to the progress of applied chemistry. Nevertheless, this gifted research worker, like many other Jews in Germany, had to endure injustice from little men (some of them with big titles). His widow became a refugee during the Nazi regime and died in the United States in 1949. Dr. Loewe, editor of *Die Pharmazeutische Industrie*, erected a beautiful memorial in his delightfully readable biography of one of the really great scientists whose untiresome searching created new industries and helped to conquer diseases which until recently were considered fatal to man and animal.

Information

"New Hydrofluoric Acid Package." J. T. Baker Chemical Co., Phillipsburg, New Jersey.

"Super-D-Canter Centrifuge." Bulletin 1254, The Sharples Corp., 2300 Westmoreland St., Philadelphia 40, Pa.

"Apiezon Oils, Greases, Sealing Compounds, and Waxes for High Vacuum Work." Bulletin 43-57. James G. Biddle Co., 1316 Arch St., Philadelphia 7, Pa.

"Labitem's", new publication by The Emil Greiner Co., 20-26 N. Moore St., New York 13, N.Y.

"Kelley Mixers." Wittemann Machinery Co., Farmingdale, New Jersey.

"Steam Valve and Butterfly Valve Sizing Charts." Fisher & Porter Co., Dept. 3940, Hatboro, Penn.

"New Monochromator." Cambridge Thermionic Corp., 483 Concord Ave., Cambridge 38, Mass.

"Penfield Water Demineralizers." Folio. Penfield Manufacturing Co., Inc., 19 High School Ave., Meriden, Conn.

"Nukem All-Purpose Resinous Cement F-66." Nukem Products Corp., Buffalo 20, N.Y.

"Series 1200 and 1400 Diaphragm Control Valves." Kieley & Mueller, 2033—43rd St., North Bergen, N.J.

"New Foam Rubber Cushion." Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

"Scientific Apparatus & Methods," and "Catalog Revisions." E. H. Sargent & Co., 4647 W. Foster Ave., Chicago, Ill.

"Vitamin B-12 and Antibiotic Feed Supplement." Merck & Co., Inc., Rahway, New Jersey.

"We Can Stop Inflation—a realistic plan to halt inflation, conceived to fit the economy of 1951." 24pp. by Edgar S. Genstein, F.A.I.C. Kem Products Company, 229 High St., Newark 2, N.J.

"Current Experience in the Estimation of Vitamin A by the USP XIV Procedure." Request, on letterhead, from Food Research Laboratories, Inc., 48-14 33rd St., Long Island City 1, N.Y.

"Nytron Inhibition of Caustic Soda Attack on Glass." The Solvay Process Division, Allied Chemical & Dye Corp., Product Development Dept., 40 Rector St., New York 6, N.Y.

"New Multi-Combination Meter for Electrolysis, Corrosion, and Cathodic-Protection Testing." M. C. Miller, 1142 Emerson Ave., West Englewood, N.J.

"Engineering Properties of Clay Soils." Bulletin No. 1, Hans F. Winterkorn, F.A.I.C., 116 Prospect Ave., Princeton, N.J.

FOR YOUR LIBRARY

"New Electronic Hygrometer." Minneapolis-Honeywell Regulator Co., Brown Industrial Division, Philadelphia 44, Pa.

"Outline of the History of Chemistry." Flow sheet, 35" x 35½". Mallinckrodt Chemical Works, St. Louis 7, Missouri.

"Acetovanillone (3-methoxy, 4-hydroxy acetophenone)" Samples and data. Marathon Corp., Chemical Div., Rothschild, Wisconsin.

"Inventory Control and Priorities. Answers to 85 Questions." For National Production Authority services, assistance, publications, and information, contact nearest Field Office of the Department of Commerce. (Listed in telephone books under U.S. Government).

To Scientific Authors

Dr. Harry L. Fisher, past-president AIC, administrative assistant, National Research Council, 2101 Constitution Ave., Washington 25, D. C., reminds research directors and others that papers dealing with new developments in science cannot be presented at the ACS Diamond Jubilee meeting in September, unless the authors have been invited to do so, as this meeting will consist only of symposia. However, contributed papers may be presented at the XIIth International Congress of Pure and Applied Chemistry which meets September 10th to 13th. Those who wish to take advantage of this opportunity should write immediately to Dr. Fisher and be prepared to submit the title and two copies of the abstract by April first.



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Book Exhibit

Bernard Silkes, F.A.I.C., chairman of the Book Committee, of the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, held March 5th, 6th and 7th, arranged the display of technical books featured at the conference.

Condensates

Ed. F. Degering, F.A.I.C.

The Miner Laboratories

Methoxychlor, pyrethrum, organic thiocyanate, or lindane (the pure gamma isomer of benzene hexachloride) are preferred to DDT by the U.S.D.A. for barn sprays to combat flies.

Saran, which appeared initially as a water repellent and completely mildew-resistant monofilament, is now to take a place among the multifilament yarns.

"The study of alchemy, the conversion of base metals into gold," according to L. Carrington Goodrich, "dates back at least to the second century before the Christian era."

Women's shoes are now being fabricated from descaled salmon skins.

Germes of Bubonic plague have been kept alive *in vitro* at the National Institute of Health for twenty-five years.

Extended sulfone therapy (three to three and a half years), according to the national leprosarium at Carville, La., is effective in curing leprosy.

Dentrifices containing ammonium salts, carbamide, and chlorophyll are being tried out on hamsters by Mitchell at the University of Minnesota.

Large scale production of DL-methionine, to supplement chicken feed, is planned by the Dow Chemical Company at the plant at Pittsburg, California.

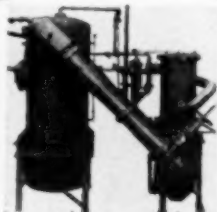
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THE CHEMIST on Microfilm

Subscribers to THE CHEMIST, who have space or storage problems, can now obtain microfilm copies of this publication from University Microfilms, 313 N. First Street, Ann Arbor, Michigan. Volume XXVI, Nos. 1 to 12, (1949), of THE CHEMIST is now available at \$1.50.

National Council Meetings

Meetings of the AIC National Council will be held at The Chemists' Club, 52 E. 41st St., New York, N.Y., on:

March 14, 1951

April 11, 1951

May 11, (at Niagara Falls Ont.)

June 13, 1951

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3 *Meleagris Gallapavo*



4 *Tympnanuchus Cupido*
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